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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

WIN, AUNG T

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 09/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/942,759	AMI ET AL.	
	Examiner	Art Unit	
	Aung T. Win	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 19 and 21 is/are pending in the application.
- 4a) Of the above claim(s) 13-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 19 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-12, 19 & 21 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-6, 11 & 12, 19 & 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Callaway (US006275500B1).

- 2.1 Regarding Claims 1 and 21, Callaway discloses a broadcast type service system (Bluetooth 1.0 system; Background) comprising:

at least one transmission device (at least one of a plurality of communication devices acting as slaves capable of communication with the master and capable of communication with at least another one of the plurality of communication devices); a reception information providing device (a transceiver operating as master); and a

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plurality of reception devices (a plurality of communication devices acting as slaves)

[Column 5, Line 10-17]

each transmission device (a first slave of the plurality of communication devices) having: a transmission device communication unit (Transceiver 50) [Figure 15] configured to carry out communications with the reception information providing device (Master communication device) and the reception devices (a plurality of communication devices acting as slaves) (configured to transmit a communication request to the master communication device to carry out communication with the reception devices) and a transmission device control unit (Processor 58) [Figure 15] configured to control the transmission device communication unit to transmit application data (data packets) to at least one reception device (a second slave of the plurality of communication devices) and to transmit (transmit to request) a reception establishing information of each transmission device (communication resource parameter such as frequency, modulation, protocol, data rate, etc.) [Column 3, Line 50-52 and Line 63-67] which is necessary for a reception device to receive the application data transmitted from each transmission device [Figure 13] [Column 5, Line 9-39] [Column 7, Line 19-46];

the reception information providing device (Master communication device) having: a reception information providing device communication unit (Transceiver acting as master) configured to carry out communications with each transmission device (a first slave of the plurality of communication devices) and the reception devices (the plurality of slaves communication devices); and a reception information providing device control unit (Processor 58) configured to control the reception information providing

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device communication unit to receive the reception establishing information (communication resource parameter such as frequency, modulation, protocol, data rate, etc.) of each transmission device transmitted from each transmission device (to receive acknowledgement of the reception establishing information from a first slave of the plurality of communication devices), and to transmit the reception establishing information of a specified transmission device to a prescribed reception device (to transmit the reception establishing information assigned to a first slave of the plurality of communication devices to a second slave of the plurality of communication devices) [Column 3, Line 26-30] [Figure 13] [Column 5, Line 9-39] [Column 7, Line 19-46]; and

each reception device having (a second slave of the plurality of communication devices): a reception device communication unit (Transceiver) configured to carry out communications with each transmission device and the reception information providing device; and a reception device control unit (processor) configured to control the reception device communication unit to receive the reception establishing information of one transmission device (a first slave of the plurality of communication devices) transmitted from the reception information providing device (master communication device), and to receive the application data (data packet) transmitted from said one transmission device according to the reception establishing information of said one transmission device (according to the reception establishing information assigned to a first slave of the plurality of communication devices) [Figure 13] [Column 5, Line 9-39] [Column 7, Line 19-46].

Callaway discloses that the reception information providing device (Master

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communication device) directs and sets up the second communication source in order for the transmission device and reception device to communicate each other directly without connecting to master device according to Bluetooth 1.0 system as claimed in order to set up and control indefinite number of communicating slaves within a network [Column 3, Line 2-22] [Figure 2].

2.2 Regarding Claim 19, which is a method claim corresponding to Claim 1 is rejected for the same reasons as stated above because the claimed steps read on the corresponding means on Claim 1.

2.3 Claims 2 and 3 are rejected for the same reason as stated above in Claim 1 rejection. Memories are inherently implemented in communications devices to store instructions and data necessary to execute and establish communications. Therefore, claimed memories must have been inherently implemented in Bluetooth Master devices to facilitate amount of storage necessary to store reception establishing information for assisting slave devices as claimed.

2.4 Claim 4 is rejected for the same reason as stated above in Claim 1 rejection. Callaway discloses the acknowledgement step initiated by master communication device necessary for the two communications slave devices to acknowledge the parameters assigned by the master communication devices [Column 3, Line 56-67].

2.5 Claim 5 is rejected for the same reason as stated above in Claim 1 rejection because claimed method substantially read on the corresponding method of Claim 1. Callaway's method allows slaves devices to communicate directly with each other in parked modes i.e., not in active modes according to Bluetooth 1.0 specification as claimed.

2.6 Claims 6, 11 & 12 are rejected for the same reason as stated above in Claim 1 and Claim 5 rejections because claimed method substantially read on the corresponding method of Claims 1 & 5. Slave devices communicates each other according to Bluetooth 1.0 specification when said devices are in active modes and Slave devices communicates each other in parked modes without connecting to Master devices according to Bluetooth 1.0 specification [See Figures and corresponding cited disclosures].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 7, 8, 9 & 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Callaway (US006275500B1) in view of Haartsen (US006590928B1).

3.1 Regarding Claims 7 & 8, Callaway discloses that the reception establishing information that indicates (communication resource parameter such as frequency, modulation, protocol, data rate, etc.) as describes in Claim 1. Although Callaway teaches that all devices in the same Piconet are synchronized to the same hopping sequence (hopping pattern) and each piconet is identified by a different frequency hopping sequence [Column 1, Line 55-60], Callaway does not clearly disclose the reception establishing information indicates the phase and clock of transmission device and Bluetooth device.

Haartsen clearly discloses the ad-hoc wireless network in which master and slave units establish communication by the address (Bluetooth address) of master unit, which determines the hopping sequence and the system clock in the master transceiver unit which determines the phase in the hopping sequence [Column 11, Line 31-47]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made that reception establishing information received by the reception device indicates a hopping pattern, Bluetooth device address, a phase and clock of transmission device as taught by Haarten to establish communication between transmission and reception device for improved synchronization.

3.2 Regarding Claim 9, Callaway discloses that the reception establishing information that indicates (communication resource parameter such as frequency,

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modulation, protocol, data rate, etc.) as describes in Claim 1. Although Callaway teaches that all devices in the same Piconet are synchronized to the same hopping sequence (hopping pattern) and each piconet is identified by a different frequency hopping sequence [Column 1, Line 55-60]. Callaway does not clearly disclose the reception information providing device communication unit transmits the reception establishing information of the specified transmission device that indicates a Bluetooth device address of the specified transmission device, a clock offset between the specified transmission device and the reception information providing device, and a clock of the reception information providing device at a time of transmitting the reception establishing information to the prescribed reception device.

Haartsen discloses master communication means and slave communication means [Figure 12] [Column 20, Line 63-67] [Column 21, Line 1-18] to generate the hop frequencies at appreciate times (synchronized to the same hopping sequence) based on the master address and determination of the clock difference (clock offset) between the master clock and slave clock after connection has been established (link establish procedure known to one skilled in the in ad-hoc wireless network art in which master determine the slave Bluetooth device address). Haartsen further discloses bridge unit C participating in different piconets 603 and 605 acting as a bridge between the source unit A in the piconet 603 and destination unit B in piconet 605 [Figure 6b] [Column 14, Line 21-53]. Haartesen clearly teaches that bridge unit comprises two transceiver units, each establish connection with unit A and unit B separately and information is transferred back and forth between two transceiver with bridge unit C by inquiry process

which determine the unit addresses of both piconet 603 and piconet 605, and control information. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify reception providing device in Callaway as taught by Haartsen so that the reception information providing device communication unit transmits the reception establishing information of the specified transmission device that indicates a Bluetooth device address of the specified transmission device, a clock offset (time difference) between the specified transmission device and the reception information providing device, and a clock of the reception information providing device at a time of transmitting the reception establishing information to the prescribed reception device to establish connection between the transmission and reception device in different piconets.

3.3 Claim 10 is rejected for the same reason described above in Claim 9 since clock offset is the function of a clock of the specified transmission device at a time of transmitting the reception establishing information from the specified transmission device to the reception information providing device and a clock of the reception information providing device at a time of receiving the reception establishing information from the specified transmission device.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to

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applicant's disclosure.

Bluetooth Specification Version 1.0 B Dec. 1st 1999


5. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aung T. Win whose telephone number is (571) 272-7549. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc Nguyen can be reached on (571) 272-7503.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Group Art Unit 2617
September 7, 2006


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